

### REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

To place the application in better form, a new abstract is present in accordance with preferred practice. No new matter is added by this change.

Claims 71-85 are presented for consideration in lieu of claims 1, 3-26 and 28-70, which have been canceled without prejudice or disclaimer. Claims 71, 75, 79 and 82 are independent. Support for these claims can be found in the original application as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the objection and rejections set forth in the above-noted Office Action.

Claim 37 was objected to due to a minor informality. Claim 37 having been canceled, this objection has become moot and should be withdrawn.

Claims 10, 11, 13 and 15 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner objected to specific recitations in these claims. These claims having been canceled, this rejection also has become moot and should be withdrawn. Nevertheless, the Examiner's comments were taken into consideration when presenting claims 71-85.

Turning now to the art rejections, claims 1, 3-26 and 28-70 were rejected under various statutory bases as being unpatentable over U.S. Patent No. 5,353,070 to Mitani et al., taken alone, or in combination with Applicants' background statement in the subject application.

These rejections are respectfully traversed. Nevertheless, Applicants submit that claims 71-85, as presented, amplify the distinctions between the present invention and the cited art.

The present invention, as recited in independent claims 71, 75, 79 and 82, is directed to a diffractive optical element, which is used for an optical system of an exposure apparatus. The diffractive optical element includes a light-shielding member composed of various materials. Further, each diffractive optical element has the light-shielding member provided at the periphery of an effective area.

Applicants submit that the cited art does not teach or suggest such features of the present invention, as recited in independent claims 71, 75, 79 and 82.

The Mitani et al. patent shows, in Figure 1, a transparent optical element. Applicants submit, however, that there is no light-shielding member on the optical element 4 in the Mitani et al. patent. Accordingly, Applicants submit that the Mitani et al. patent does not teach or suggest the salient features of Applicants' present invention as recited in the independent claims.

Applicants further submit that the remaining art cited does not cure the deficiencies noted above with respect to the Mitani et al. patent.

Specifically, Applicants submit that their background statement does not teach or suggest a diffractive optical element, which is used for an optical system of an exposure apparatus, which includes a light-shielding member composed of a particular material, at a periphery of an effective area, in the manner of the present invention recited in the independent claims.

Accordingly, Applicants' background statement adds nothing to the teachings of the Mitani et al. patent that would render obvious Applicants' present invention recited in those claims.


For the foregoing reasons, Applicants submit that the present invention, as recited in independent claims 71, 75, 79 and 82, is patentably defined over the cited art, whether that art is considered individually or in combination.

Dependent claims 72-74, 76-78, 80, 81 and 83-85 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the objection and rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,

  
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## **APPENDIX A**

### **IN THE ABSTRACT**

[A grating member comprising a diffraction grating having a periodic structure for converting an incident wavefront at the central area into a prescribed wavefront is provided with a light-shielding member comprising a UV-light absorbing material at the periphery of the grating member in order to reduce excess light and scattered light.]

-- A diffractive optical element, which is used for an optical system of an exposure apparatus, includes a light-shielding member composed of a laminated layer of Cr oxide and Cr at a periphery of an effective area. --